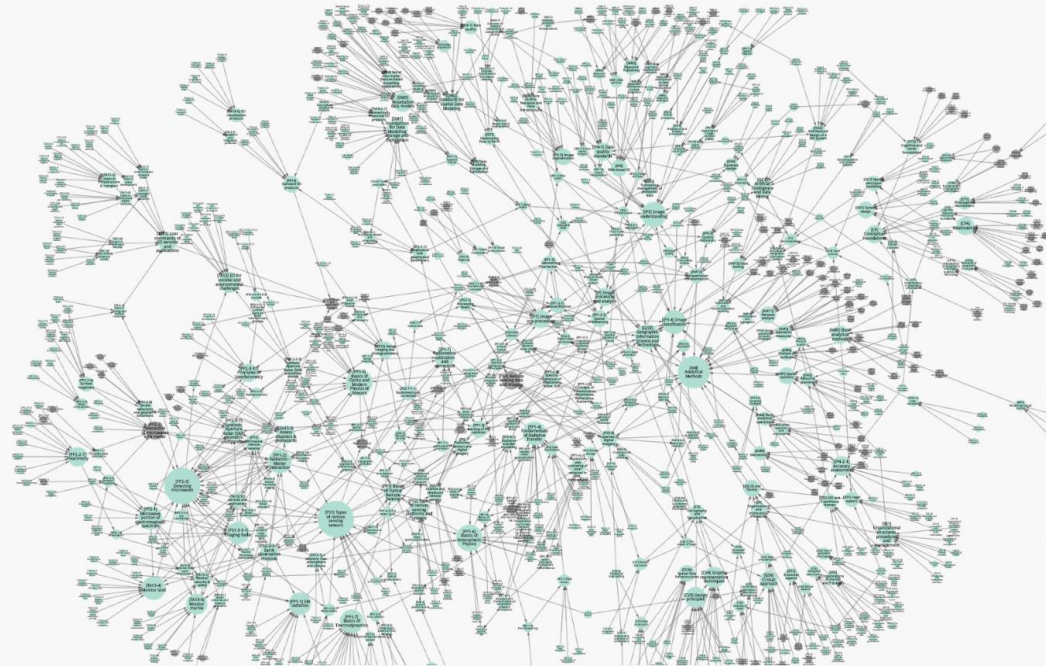


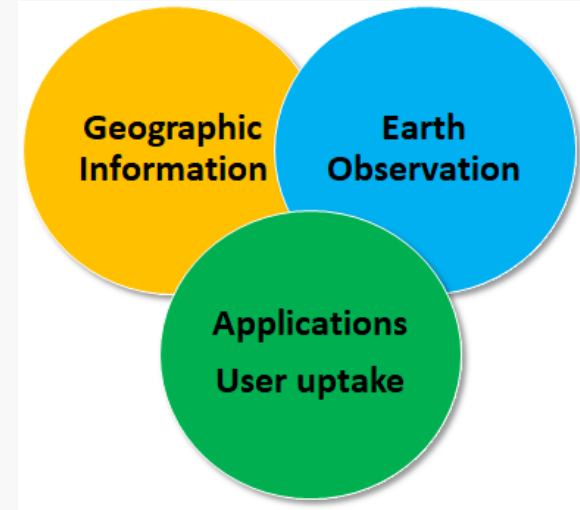
What is a Body of Knowledge (BoK)?

A formal **description of a professional domain** represented by a complete set of concepts **in a structured way**, including the theories, methods and technologies.



EO4GEO Body of Knowledge

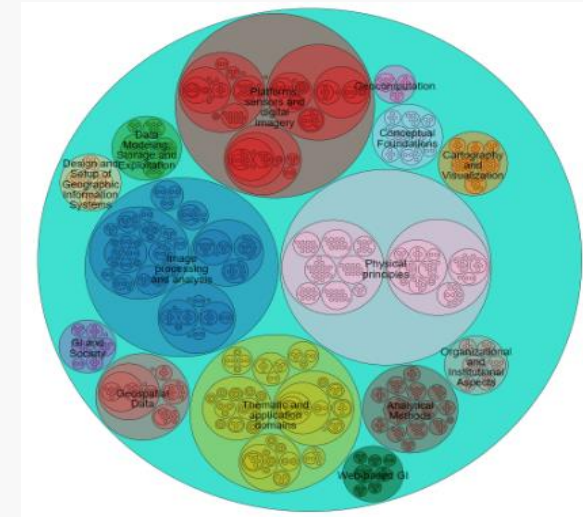
- Builds on previous initiatives
 - focused mainly on Geographic Information
 - with limited number of Earth Observation concepts
 - too static and too academic
- Addition of detailed EO part
 - covering different aspects of Earth Observation
- Addition of market oriented perspective
 - focus on skills and user uptake



Three main knowledge areas in
the EO4GEO BoK

EO4GEO Body of Knowledge

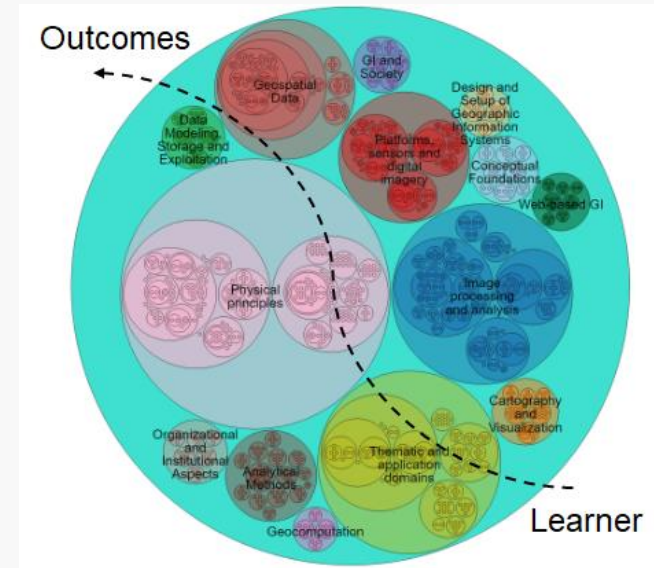
- Builds on previous initiatives
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 - with limited number of Earth Observation concepts
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- Addition of detailed EO part
 - covering different aspects of Earth Observation
- Addition of market oriented perspective
 - focus on skills and user uptake
- Consists of approx. 1000 concepts developed by the experts
- Publicly available from tomorrow October 21st!

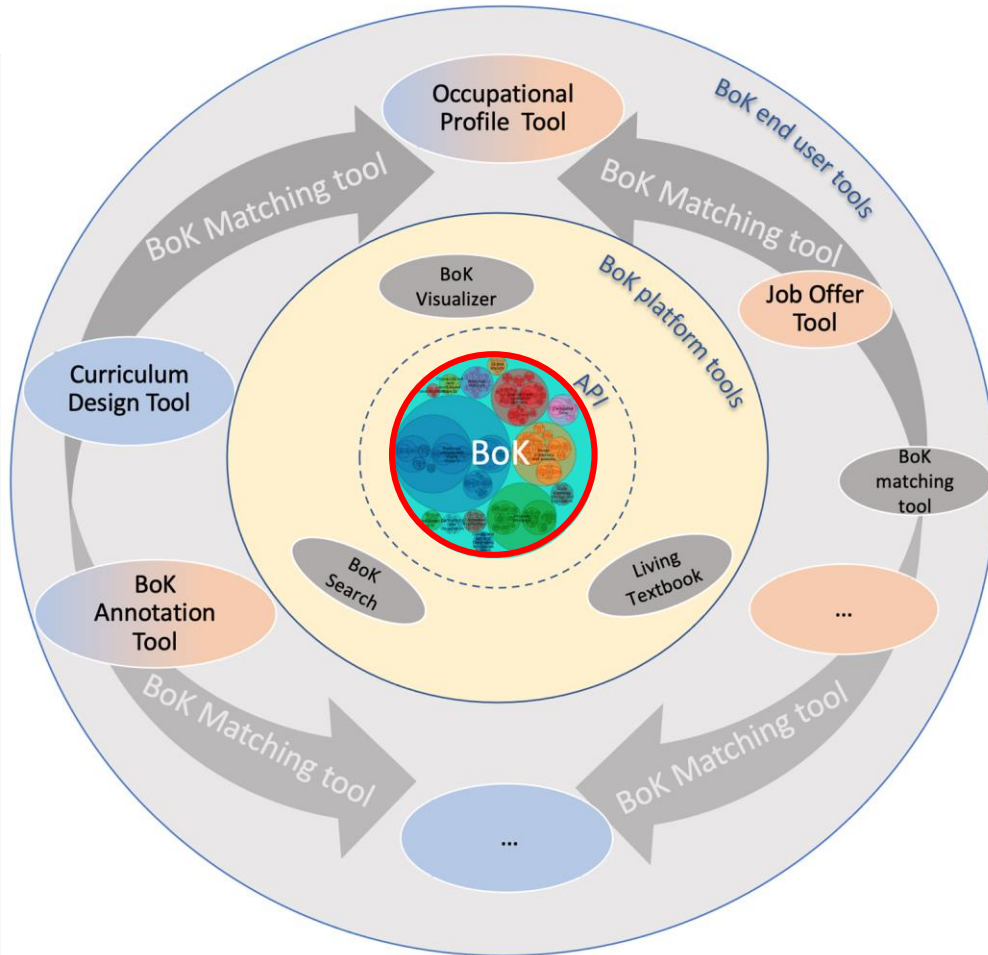


EO4GEO BoK
<http://www.eo4geo.eu/bok/>

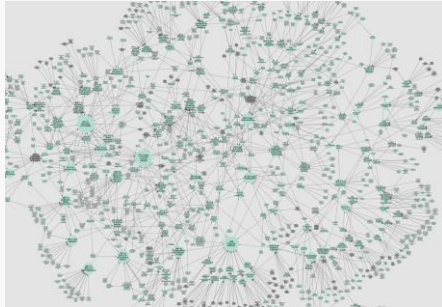
Why BoK is important for a sector?

- Reach collection of knowledge, skills and competences required
- Foundation for developing the curriculum programs and vocational training
 - ◆ Curriculum design
 - ◆ Skills upscaling
- Supports workforce recruitment and job assessments
 - ◆ Employee screening
 - ◆ Defining occupational profiles
 - ◆ Job offer description
 - ◆ ...





Editing and visualizing the EO4GEO Body of Knowledge



Rob Lemmens

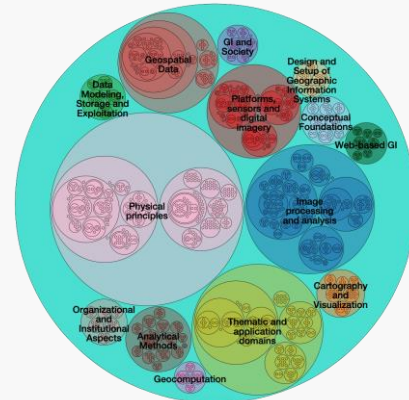
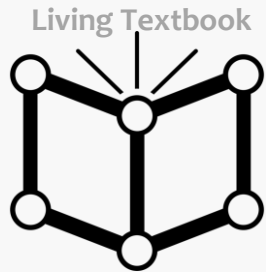
([link](#) to watch the recorded presentation)

Living Textbook



**University of Twente
Faculty of Geo-Information Science and
Earth Observation (ITC)**

eo4geoplatform



Occupational Profile Tool
Job Offer Tool
Curriculum Design Tool
BoK Matching Tool

...

<http://bok.eo4geo.eu>

<http://eo4geo.uji.es>



Define generic, recurring prototypical **job descriptions**



Companies and public institutions



Have a catalogue of GI & EO Occupational Profiles
based on the **BoK**

Explore **most demanded** Knowledge and Skills



Define **job offers** based on occupational profiles



HR offices from private companies, public institutions,
or academia



Job and Training offers based on the **BoK**
Explore **most demanded** Knowledge and Skills

Occupational Profile & Job Offer

- Knowledge - BoK concepts

[PS4] Satellite and Airborne Sensors and Missions Databases

[TA7-4] Image processing (value) chain

[IP5] Infrastructure

[WB] Web-based GI

[DA] Design and Setup of Geographic Information Systems

[OI4-5b] SDI performance measurement and assessment

[OI3b] Spatial Data Infrastructures

[OI3] Geospatial data sharing

- Skills - BoK concepts skills

[OI4-5b] Compare different frameworks for assessing Spatial Data Infrastructures

[OI4-5b] Design an SDI assessment framework and methodology for assessing and evaluating an SDI

[OI4-5b] Develop a strategy to improve the performance of an SDI initiative

[OI4-5b] Explain the results of an SDI assessment

Occupational Profile Tool
eo4geotools Occupational Profile

OPT / Detail
Home Login

Expert on integration of Copernicus space data into SDIs

The expert is familiar with the Copernicus data and services, as well as with the tools to access and retrieve the data of the different Copernicus sensors from the different on-line repositories. Moreover, (s)he is familiar with the integration of Copernicus data (and related information extracted) in Spatial Data Infrastructures.

Artificial intelligence (Information and Communication Technologies (ICTs)) EQF 6

Computer science (Information and Communication Technologies (ICTs))

Software for data processing, use of (Information and Communication Technologies (ICTs))

Geomatics (Physical sciences)

Knowledge

[PS4] Satellite and Airborne Sensors and Missions Databases

[TA7-4] Image processing (value) chain

[TA1] Atmosphere Monitoring

[TA2] Climate Change Monitoring

[TA3] Land Monitoring

[TA4] Marine Monitoring

[TA5] Security

[TA6] Emergency

[IPS] Infrastructure

[WB] Web-based GI

[DA] Design and Setup of Geographic Information Systems

Knowledge distribution

PS - Platforms, sensors and digital imagery 9%	<div style="width: 9%; height: 10px; background-color: #f4a460;"></div>
TA - Thematic and application domains 64%	<div style="width: 64%; height: 10px; background-color: #90c040;"></div>
IP - Image processing and analysis 9%	<div style="width: 9%; height: 10px; background-color: #0070c0;"></div>
WB - Web-based GI 9%	<div style="width: 9%; height: 10px; background-color: #0070c0;"></div>
DA - Design and Setup of Geographic Information Systems 9%	<div style="width: 9%; height: 10px; background-color: #f4a460;"></div>

Skills

Transversal skills

work in teams

communicate problems to senior colleagues

communicate professionally with colleagues in other fields

communicate with customers

communicate with stakeholders

develop strategy to solve problems

solve technical problems

solve ICT system problems

EO4GEO Tools
EO4GEO
User Manual
Release Notes v1.01
Contact



Define **educational offers** based on the **BoK**



Academia, training providers



Common vocabulary for knowledge and skills (**BoK**)

Explore **most offered** Knowledge and Skills

Curriculum Design Tool

eo4geotools Curriculum Design

New Educational Offer

- New Educational Offer
- New Module
- New Course
- New Lecture

Annotate with BoK concepts

- [O3b] Spatial Data Infrastructures

Title

New Lecture Re-use BoK title

Description

A Spatial Data Infrastructure can be defined as the collection of technological and non-technological components to facilitate and coordinate the exchange of and sharing of spatial data. The concept Re-use BoK description

ECTS ⁱ 0 Is practical ⁱ

Learning Outcomes (0)

Explore the Body of Knowledge to add some or add custom learning outcomes. Re-use BoK learning outcomes

Add custom learning out Add custom LO

Please see the guidelines to define skills

Transversal skills

Search... Search full ESCO skills

Re-use BoK content and Annotate BoK concepts to your educational offer.

Body of Knowledge - Search knowledge and skills 1

spatial data inf

X Clear search results

15 result(s) for spatial data inf



- OI3b **Spatial Data Infrastructures** [Details](#)
...A **Spatial Data Infrastructure** can be defined as the collection of technological and non-technological ...
- OI4-5b **SDI performance measurement and assessment** [Details](#)
SDI performance assessment is about collecting, analyzing and providing information on the perform...
- WB3-4 **Publishing open data** [Details](#)
- DA3-4 **WebGIS, SDI services, map services** [Details](#)
... - technical peculiarities of **spatial data infrastructures** - standardised GI services for SDI: WMS, WFS, CSW, Transformation Servi...
- DM2-6b **Other standards** [Details](#)
... of metadata - Metadata in an **spatial data infrastructure** with many There are quite a number of relevant standards for GI courses...
- DM4-5 **Examples of important application models** [Details](#)
...petition of the principles of **Spatial data infrastructures** - Overview on the INSPIRE initiative and the goals related - The INSPIR...
- GD12 **Metadata, standards, and infrastructures** [Details](#)
...rotocol, transport protocols, **spatial data infrastructure**, INSPIRE, OGC, DCAT profiles for CKAN applications bridging metadata f...
- GD4-2 **Metadata, standards, and infrastructures** [Details](#)
...rotocol, transport protocols, **spatial data infrastructure**, INSPIRE, OGC, DCAT profiles for CKAN applications bridging metadata f...
- GD4 **Data Quality, Metadata and Data Infrastructure** [Details](#)
...ollowing proper standards and **spatial data infrastructure** regulations for data collection and management. System of basic data q...
- GS2-1 **GI Business models** [Details](#)
...ents are the establishment of **spatial data infrastructures** (SDIs) worldwide, the democratization of geographic knowledge, and the ...

Curriculum Design Tool
eo4geo tools | Curriculum Design

Management view on Spatial Data Infrastructures

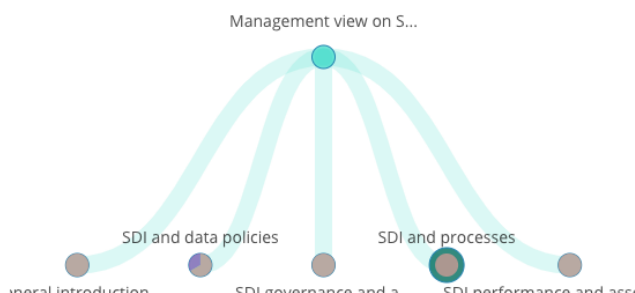
EQF: 4

KU Leuven, SADL

EO4GEO

General view ⓘ

Management view on S...



Info ⓘ

Lecture: SDI and processes

This lecture explains how SDI data and components can be used to support the work processes of government –and other –organizations. The lecture explains what work processes are and how processes and their main components can be identified. It will also look at the mapping and modelling of processes through business process modelling tools and languages.

Is practical: false

▼ Learning Outcomes (3):

- Explain the importance of work processes in the context of SDI
- Apply the essential elements of business process management to SDI processes
- Prepare a model of an SDI work process

Annotated BoK concepts (current educational unit - this node):

- [\[O13b\] Spatial Data Infrastructures](#)
- [\[O14-3\] Coordination and organizational structure](#)



Compare any **BoK annotated** resource



All types of audiences



Find best matching job offers to an annotated CV

Rank educational offers according to an occupational profile

Many more!

<https://eo4geo-bmt.web.app/>

Search EO4GEO resource

Custom BoK selection

Upload

Search EO4GEO resource

Currently selected resource: Expert on integration of Copernicus space data into SDIs Nereus

All

Educational Offers

Occupational Profiles

Job Offers

Others

Sort by:

Last updated

Name

Organization

Expert on integration of Copernicus space data into SDIs Nereus (Occupational Profile) EO4GEO 13 Knowledge | 9 Skills | Updated: 30-Sep-2020

The expert is familiar with the Copernicus data and services, as well as with the tools to access an[...] [More info](#)

INSPIRE expert (Occupational Profile) EO4GEO 10 Knowledge | 2 Skills | Updated: 31-Mar-2020

Expert in the implementation of all the steps required by the INSPIRE Directive.[...] [More info](#)

Human Resources Officer (Occupational Profile) EO4GEO 1 Knowledge | 3 Skills | Updated: 31-Mar-2020

Serve as a link between management and employees by handling questions, interpreting and administer[...] [More info](#)

Expert on information extraction from Copernicus space data (Occupational Profile) EO4GEO 11 Knowledge | 4 Skills | Updated: 25-May-2020

The expert is familiar with the Copernicus data and services, as well as with the tools to access an[...] [More info](#)

Search EO4GEO resource

Custom BoK selection

Upload

Search EO4GEO resource

Currently selected resource: none

All

Educational Offers

Occupational Profiles

Job Offers

Others

Sort by:

Last updated

Name

Organization

Matching Score

Management view on Spatial Data Infrastructures (Educational Offer) EO4GEO - Educational offers 17 Knowledge | 47 % Matching Score | Updated: 29-Sep-2020

This module gives an overview of the non-technical aspects related to Spatial Data Infrastructures [...] [More info](#)

Introduction to Citizen Science in GI and EO (Educational Offer) EO4GEO - Educational offers 4 Knowledge | 25 % Matching Score | Updated: 10-Sep-2020

This lecture is the base for a webinar on Citizen Science and EO/GI. Citizen science projects can be[...] [More info](#)

Earth Observation Test (Educational Offer) EO4GEO 5 Knowledge | 20 % Matching Score | Updated: 10-Sep-2020

This is a test course created by Climate-KIC and aims to identify areas of improvement for the Curri[...] [More info](#)

GIS Programming in web environments (Educational Offer) EO4GEO - Educational offers 6 Knowledge | 17 % Matching Score | Updated: 15-Sep-2020

The main objective of this course is to provide good practices when creating web map applications. T[...] [More info](#)

Matching BoK concepts 1

- [O3] Geospatial data sharing
- [O3b] Spatial Data Infrastructures
- [O4-5b] SDI performance measurement and assessment

Matching distribution 1

OI - Organizational and Institutional Aspects



Differing concepts 1

Expert on integration of Copernicus space data into SDIs Nereus

- [DA] Design and Setup of Geographic Information Systems
- [IP5] Infrastructure
- [PS4] Satellite and Airborne Sensors and Missions Databases
- [TA1] Atmosphere Monitoring
- [TA2] Climate Change Monitoring
- [TA3] Land Monitoring
- [TA4] Marine Monitoring
- [TA6] Emergency
- [TA7-4] Image processing (value) chain
- [WB] Web-based GI

Not Matching distribution

DA - Design and Setup of Geographic Information Systems
 IP - Image processing and analysis
 PS - Platforms, sensors and digital imagery
 TA - Thematic and application domains
 WB - Web-based GI



Management view on Spatial Data Infrastructures

- [GS1] Legal aspects
- [GS2] Economic aspects
- [O3-1] Drivers and incentives for sharing geospatial data
- [O4-3] Coordination and organizational structure
- [O4-7] SDI governance

Not Matching distribution

GS - GI and Society
 OI - Organizational and Institutional Aspects



Planned training actions for testing and validation of the EO4GEO strategy

Target groups:

Students
Academic teachers
EO/GI data scientists
Technicians/assistants

City planners
Environmental officers/managers
Green planners
Climate adaption coordinators
Municipal and Regional authorities

Actions: Workshops, Summer school, Webinars and Thesis.

Providers: Authorities, Industry/SMEs and Academia/VET

Real-world problems are identified and described, which will be solved by using GI and EO techniques during the learning process.

Integrated applications

- Landslides & Cultural Heritage sites
- Agro monitoring system to support regional decision-making
- Land use change monitoring
- Landslides documentation
- Object recognition through Machine Learning

Smart cities

- Heat islands & city planning
- Urban green structures & quality of life/ecosystem services

Climate change

- Air quality monitoring & management
- CO₂ budgets & solar potential maps at municipal level
- Early warning for disease epidemics at regional level
- Urban greenery management

Starting from December 2020, different training actions will be implemented. More in EO4GEO website. We invite you to participate!